

## CLAIMS

What is claimed is:

1. A method for suppressing interference in a motor vehicle radio from the operating frequency or the harmonics of the operating frequency of a source of time varying signal in response to tuning the radio to a selected frequency, the method comprising the steps of:
  - 5 communicating the selected frequency to the source of time varying signal;
  - comparing the selected frequency to the operating frequency and to the harmonics of that operating frequency; and
  - adjusting the operating frequency if the operating frequency or any
  - 10 of the harmonics of the operating frequency fall within a predetermined interference range of the selected frequency.
2. The method of claim 1 wherein the step of communicating comprises the step of sending a message from the radio to the source of time varying signal over a data bus.
3. The method of claim 2 wherein the step of communicating comprises the step of sending a message over a serial data bus.
4. The method of claim 1 wherein the motor vehicle radio comprises an AM radio and the step of communicating comprises the step of communicating a selected AM radio frequency to the source of time varying signal.
5. The method of claim 4 wherein the source of time varying signal comprises a switching power supply and the step of communicating comprises the step of communicating the selected AM radio frequency to the switching power supply.

6. The method of claim 5 wherein the step of comparing comprises the step of determining whether the operating frequency or any of the harmonics of the operating frequency are within about plus or minus 5 kHz of the selected frequency.

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7. The method of claim 1 wherein the source of time varying signal comprises a switching power supply and the step of communicating comprises the step of communicating a selected radio frequency to the switching power supply.

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8. The method of claim 1 wherein the step of adjusting the operating frequency comprises incrementing or decrementing the operating frequency by an amount sufficient that the operating frequency and all of the harmonics of the operating frequency differ from the selected frequency by an amount greater than the predetermined interference range.

9. The method of claim 8 wherein the step of adjusting the operating frequency comprises the step of incrementing or decrementing the operating frequency by about 3 kHz.

10. A method for suppressing interference in a motor vehicle AM radio from frequencies generated by a plurality of electronic modules in the motor vehicle, each of the plurality of electronic modules comprising an electronic control unit and a source of time varying signal coupled to the electronic control unit and configured to operate at an operating frequency, the method operative in response to tuning the AM radio to a selected frequency comprising the steps of:

5 sending a message from the AM radio to each of the electronic control units in each of the plurality of electronic modules communicating the selected frequency;

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comparing the selected frequency to the operating frequency of the source of time varying signal in each of the plurality of electronic modules and to the harmonics of each of the operating frequencies;

adjusting the operating frequency of the source of time varying  
15 signal in any of the plurality of electronic modules for which the operating frequency or any harmonic of the operating frequency is within a predetermined interference range of the selected frequency; and

leaving unadjusted the operating frequency of the source of time  
varying signal in any of the plurality of electronic modules for which the  
20 operating frequency and all harmonics of the operating frequency are different from the selected frequency by more than a predetermined interference range.

11. The method of claim 10 wherein the step of sending a message  
comprises sending a message from an electronic control unit coupled to the  
AM radio to each of the electronic control units in each of the plurality of  
electronic modules over a data bus coupling each of the electronic control  
5 units.

12. The method of claim 10 wherein the step of sending a message  
comprises sending a message from an electronic control unit coupled to the  
AM radio to each of the electronic control units in each of the plurality of  
electronic modules over a serial data bus coupling each of the electronic  
5 control units.

13. The method of claim 10 wherein the step of comparing  
comprises the step of the electronic control unit in each of the plurality of  
electronic modules comparing the selected frequency to the operating  
frequency of the source of time varying signal coupled to that electronic  
5 control unit and to the harmonics of that operating frequency.

14. The method of claim 10 wherein the step of adjusting comprises the step of incrementing or decrementing the operating frequency of any of the sources of time varying signal in any of the plurality of electronic modules by about 3 kHz.

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15. The method of claim 10 wherein the step of adjusting comprises the step of decrementing the operating frequency of any of the sources of time varying signal in any of the plurality of electronic modules by about 3 kHz.

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16. The method of claim 10 wherein the step of comparing comprises comparing the operating frequency of a source of time varying signal coupled to and configured to power the AM radio and the harmonics generated by that source of time varying signal with the selected frequency.

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17. A method for suppressing interference in a motor vehicle AM radio from frequencies generated by a plurality of electronic modules in the motor vehicle, each of the plurality of electronic modules comprising an electronic control unit and a switching power supply coupled to the electronic control unit and configured to operate at an operating frequency, the method operative in response to tuning the AM radio to a selected frequency and comprising the steps of:

10 sending a message communicating the selected frequency from an electronic control unit coupled to the AM radio to the electronic control units in each of the plurality of electronic modules;

comparing in each of the plurality of electronic modules the selected frequency to the operating frequency of the switching power supply in that electronic module;

15 adjusting the operating frequency of the switching power supply in any of the plurality of electronic modules for which the operating frequency or

any harmonic of the operating frequency is within a predetermined interference range of the selected frequency.

18. The method of claim 17 wherein the step of adjusting comprises the step of adjusting the operating frequency by an amount sufficient to insure that the operating frequency and any harmonic thereof differ from the selected frequency by an amount greater than the
- 5 predetermined interference range.